APPENDIX B

ARMORED-LIGHT OPERATIONS

Armored and mechanized and lighter infantry forces operate effectively together provided the division commander tailors his force to the factors of METT-T. The combined use of armored-light forces permits the commander to maximize his combat power and increases the forces' lethality and endurance. The strengths of one type unit offset the inherent weaknesses of another. Armored-light operations merely extend the combined arms concept.

Not all situations are suitable for armored-light operations. Armored and light forces are best employed when they take advantage of their respective strengths. These are discussed in Chapter 1 and highlighted in following paragraphs.

ARMORED-LIGHT FORCES

Ground mobility, armored protection, and lethality describe the capabilities of ***armored forces.*** Armored forces include mechanized infantry, armored, and ground cavalry units. Because of their mobility and protection, they are best employed where battles are fought over wide areas of relatively unrestricted terrain. Their capabilities and limitations are discussed in Chapter 1.

Light forces include infantry, light infantry, airborne, and air assault units. Ranger and other special operations forces are often classified as light; however, they are normally employed differently than traditional infantry. The use of Ranger and special operations forces as light infantry is addressed in FM 7-30, FM 7-85, and the 31-series field manuals on special forces operations.

Light forces provide the Army versatility and strategic flexibility through their capability for rapid deployment. Airborne units are capable of opposed entry into enemy-held areas anywhere strategic transportation assets can reach. Airborne forces help the rapid buildup of combat power in an objective area. Air assault forces, although not as strategically deployable as airborne units, maintain a significant tactical self-deployment capability. The air assault division maximizes the effectiveness of integrated attack and assault helicopter operations as well as the capability to rapidly reposition infantry forces on the battlefield. Force limitations are also discussed in Chapter 1.

CONCEPT OF EMPLOYMENT

The goal of armored-light operations is to optimize both forces to defeat the enemy by providing commanders many flexible options. Through the estimate process (FM 101-5), commanders determine the appropriate force level at which task organization should occur, tasks to accomplish, command and support relationships, additional augmentation and support required, and concept of logistics support.

No set formula exists for task-organizing armored and infantry forces. Commanders apply METT-T and other basic considerations to the decision. These include the ever-increasing lethality of modem weapons, the speed with which an enemy can strike friendly units, the tactics friendly forces will use to defeat the enemy forces, the ability of friendly forces to move across the terrain, and the CS and CSS requirements. All of these factors influence the commander when he selects the final combination of armored and light forces.

Under certain circumstances, task-organizing an armored division with a brigade from an infantry division or vice versa may be necessary to accomplish a specific mission. However, task-organizing elements below brigade level in a division may result in a piecemeal effort and undue logistics burdens on both the gaining and losing units.

Infantry units attached to armored forces should not be so overburdened with combat, CS, and CSS augmentations that they lose their advantage in restrictive terrain. Light forces will need transportation, however, to keep up with the mobile armored force. On the other hand, without augmentation, a light division normally will not be able to support an attached armored force. Therefore an armored force will normally come to the infantry force in an OPCON relationship (the parent division provides logistics support).

Holding static positions on today's highly lethal battlefield is risky. Field fortifications offer some protection against modern weapons, such as artillery with proximity fuzes, precision-guided munitions, cluster bomb munitions, and fuel air explosives. Infantry forces achieve protection through dispersion and proper use of terrain. Armored forces protect themselves through their mobility, speed, and armored protection.

PLANNING CONSIDERATIONS

The principles of battle command do not change with an armored-light force; however, organization techniques and support procedures differ. Commanders and staffs at all levels must become familiar with these differences. The success of armored-light operations requires detailed planning and continuous staff coordination and liaison.

Task Organization

When establishing the armored-light force, the directing headquarters defines the command relationships. The force is most effective when task-organized. Although the throughput differs significantly, the armored division's class III, class V, and maintenance forward are similar to the light division's. One major difference, however, is that the austere equipment and personnel environment in the CSS area requires the light force to emphasize replacement over repair. When considering cross attaching an armored and an infantry unit, planners examine—

- The size and mission of the force.
- The location of the deploying unit in relation to its parent unit.
- The support capability of the force to which the deploying force may be assigned.
- The relationship of the deploying CSS elements to the receiving unit.
- The source of support requirements for both forces.
- The self-sustaining capability of the deploying force.

These considerations will vary based on METT-T, support requirements, and the tactical situation.

Regardless of the command or support relationship, all forces share one common concern. That is the flow of information from the deployed unit to the new controlling headquarters. The parent unit must provide the following types of logistics data to the gaining division:

- POL critical needs.
- Current status of each class of supply.
- Maintenance workload and backlog.
- Location of supply and maintenance activities.
- Transportation assets.
- Class V requirements.
- Class IX availability.
- Status of personnel.
- Estimate of logistics shortfalls.
- Alternatives to obtain shortages and preferred contingencies to overcome unexpected supply, maintenance, medical, transportation, and recovery requirements.

The assignment of armored forces to nonarmored units requires careful thought. An armored division is normally attached to a corps or a joint force. An armored brigade is most often OPCON to an infantry division. An armored battalion is usually OPCON to an infantry brigade. The infantry division may require additional ground transportation assets from corps to transport supplies when conducting extended operations. The corps also adds appropriate maintenance units to the armored division support elements.

To be most effective, infantry forces operate in at least division size. Although the division fights as a single entity, it disperses widely throughout a

relatively large area and conducts synchronized but decentralized operations. An infantry division is normally attached to a corps or joint force. An infantry brigade can be attached or OPCON to an armored division. An infantry battalion can be attached or OPCON to an armored brigade.

Note that the infantry brigade deploys with an austere CS and CSS allocation. The armored division will require transportation support from corps to provide mobility for the infantry unit in support of its tactical operations. Increased equipment densities may exceed the maintenance capabilities of the gaining division and require additional assets from corps. Infantry divisions do not have a DISCOM large enough to support the division's operations and easily support a detached brigade or battalion supporting an armored force.

In addition to differences in combat service support, major differences between an infantry division and an armored or a mechanized division exist in the areas of antitank, chemical, and transportation capabilities. Augmentation of forces is based on METT-T. Figure B-1 is an example of a robust augmentation package for an infantry division.

The infantry brigade will habitually deploy to the supported unit with the units shown in Figure B-2, page B-4. Figure B-2 also provides an example of augmentation that the brigade could require.

Figure B-3, page B-4, shows what an armored brigade operating as part of an infantry division often brings as part of its normal allocation. It also depicts what the infantry division usually provides.

DIVISION HHC	1 ENGINEER BATTALION	1 DIVISION ARTILLERY
3 MANEUVER BRIGADE HHCs	1 AVIATION BRIGADE	1 MILITARY POLICE COMPANY
9 INFANTRY BATTALIONS	1 MILITARY INTELLIGENCE BATTALION	1 BAND

AUGMENTATION/SUPPORT REQUIREMENTS

MANEUVER	COMMAND AND CONTROL	ENGINEER	FIRE SUPPORT	NBC	SOF	SUSTAINMENT
ANTITANK CAPABILITY	LNO	2–CORPS CBT ENGR BN	1–CORPS FA BDE 2–155 (SP) BNs 1–MLRS BTRY EQUIPMENT 108 DMTs 27 FIST DMTs 1 DIV ARTY TACFIRE SET 3 BN TAC-FIRE SETS 15 VF MEDs 2 Q37 RADARS	1–CHEMICAL CO	1–CIVIL AFFAIRS BN 1–PSYOP CO	6–TRK CO 1–MAINT SPT TM 1–MSL MAINT SPT TM 1–AVIM MAINT TM 1–SUPPLY SPT TM 1–GRREG SEC 1–CEB SEC 1–PSB; 1 FI BN 1–S&S CO 1–MAINT CO (DS) 1–ORDNANCE CO (DS) 1–MEDIUM TRK CO 3–FST 2–CSH 1–AMB CO (GROUND) 1–AMB CO (AIR)

Figure B–1. Robust division augmentation

BRIGADE HHC	1 ENGINEER COMPANY	1 FORWARD SUPPORT BATTALION
3 BATTALIONS	1 MILITARY POLICE PLATOON	3 HEAVY EQUIPMENT TRANSPORTERS
1 155 (SP) BATTALION	3 GROUND SURVEILLANCE RADARS	3 5,000-GALLON FUEL TANKERS
1 ADA BATTERY	2 MSE EXTENSION NODES	CLASS IV ROWPU

AUGMENTATION/SUPPORT REQUIREMENTS					
COMMAND AND CONTROL	**FIRE SUPPORT**	**ENGINEER**	**NBC**	**INTELLIGENCE**	**SUSTAINMENT**
LNO CA DS TM	155MM BN	1–CORPS CBT ENGR BN	1–CHEMICAL CO	IEWSE MLQ34, TACJAM	1–FWD SURG TM

Figure B–2. Infantry brigade augmentation

BRIGADE HHC	1 FWD SPT SUPPLY COMPANY	3 GROUND SURVEILLANCE RADARS
3 BATTALIONS	1 FWD SPT MAINT COMPANY	1 TACP
1 ENGINEER COMPANY	1 FWD SPT MED COMPANY	1 ROWPU
1 105(T) ARTILLERY BATTALION	2 MSE EXTENSION NODES	CLASS IX (ASL)
1 FASCO	1 MILITARY POLICE PLATOON	1 DISCOM MATERIEL MGT INTERFACE TEAM

AUGMENTATION/SUPPORT REQUIREMENTS						
COMMAND AND CONTROL	**AIR DEFENSE ARTILLERY**	**ENGINEER**	**FIRE SUPPORT**	**INTELLIGENCE**	**NBC**	**SUSTAINMENT**
LNO	1–AIR DEFENSE BATTERY	1–CORPS CBT ENGR BN	1–155 (SP) BN	IEWSE	1–SMOKE/ DECON PLT	2–LT TRK CO 1–MAINT SPT TM 1–FWD SURG TM

Figure B–3. Armored brigade augmentation

HHC	1 SCOUT PLATOON	1 LIGHT ENGINEER PLATOON
3 RIFLE COMPANIES	1 MORTAR PLATOON	1 UNIT-LEVEL MAINT TEAM
1 MEDICAL PLATOON	1 SUPPORT PLATOON	1 MAINT SPT TM (DS)
1 ANTITANK PLATOON	1 COMMUNICATIONS PLATOON	1 MESS TM

AUGMENTATION/SUPPORT REQUIREMENTS				
COMMAND AND CONTROL	**FIRE SUPPORT**	**ADA**	**NBC**	**SUSTAINMENT**
LNO	1–VF MED W/FSO 12–DMDs 3–FIST DMDs	1–AIR DEFENSE PLATOON	1–SMOKE/DECON PLATOON	1–LT TRUCK COMPANY

Figure B–4. Infantry battalion augmentation

HHC	1 MEDICAL PLATOON	1 MAINTENANCE SPT TM (IDS)
4 MECH OR TANK CO	1 MAINTENANCE PLATOON	CLASS IX
1 ANTITANK CO (IN MECH)	1 ENGINEER COMPANY	1 FORKLIFT
1 SCOUT PLATOON	2 GSRs	5 5,000-GAL FUEL TANKERS
1 MORTAR PLATOON	1 COMMUNICATIONS PLATOON	2 HET
1 SUPPORT PLATOON	1 MESS TEAM	

AUGMENTATION/SUPPORT REQUIREMENTS			
COMMAND AND CONTROL	ADA	NBC	SUSTAINMENT
LNO	1–AIR DEFENSE PLATOON	1–SMOKE/DECON PLATOON	NONE

Figure B–5. Armored battalion augmentation

The infantry battalion is task-organized with combat and CSS assets from the parent brigade. It normally requires transportation and little augmentation except as noted in Figure B-4. The armored battalion is usually task-organized with CS and CSS assets from the parent brigade. See Figure B-5.

Offensive Considerations

Planning and execution considerations for tactical armored-light offensive operations are based on a METT-T analysis. The following discussion highlights some of these considerations in only one example for the reader.

In offensive operations, armored forces may lose the ability to maneuver when enemy forces confront them on key restrictive terrain that dominates friendly routes of advance. However, infantry forces can attack at night to secure a critical pass, destroy enemy forces, control the terrain, and secure a route of advance for the armored forces.

In this situation, the division commander considers several key points. Limited air defense dictates employing light forces at times or locations where the air threat has negligible effects. Corps transportation assets must move the infantry division's combat elements rapidly into forward assembly areas. Additional artillery and target acquisition assets may be required to enable the infantry division to engage deep targets and execute counterfires. A corps 155-millimeter artillery battalion with a reinforcing mission and access to other target acquisition assets significantly increases the infantry force's counterfire capability. Elements that support the light force must provide their own CSS or receive it from a higher headquarters.

Defensive Considerations

This section describes fundamental considerations in armored-light tactical defensive operations. Defensive tactics illustrated in the example are not the only options available to commanders. Commanders organize their defenses based on a METT-T analysis. The following paragraphs highlight only a few key points that commanders consider.

Infantry forces can defend a critical avenue of approach into a sector; however, they are structured for combat in close terrain and have limited antitank weapons. Therefore, a preferred armored-light defense forces the enemy into restricted terrain, causing him to dismount his force and attack our infantry. This tactic will cost the enemy both time and casualties. If the enemy does not dismount but continues through the infantry defense, he will become easy prey for our antiarmor ambushes. In either case, the enemy force will suffer losses and his advance will be slow or denied.

Commanders consider the following points when conducting this type of defense. They place combat engineer assets in direct support of light infantry forces for countermobility and survivability operations. The division commander requests corps antiarmor assets OPCON to the light force to increase the division's ability to destroy enemy armor. Corps field artillery assets receive a reinforcing mission to the infantry division artillery specifically to engage deep targets and conduct counterfires. Critical elements of the infantry division must be within the SHORAD envelope to adequately protect against air attack. An armored brigade and a corps attack helicopter battalion may be OPCON to the infantry division as a mobile counterattack force.

Infantry brigades position forces to fight in depth from reverse slope positions along restrictive mobility corridors on carefully selected and prepared terrain to destroy the enemy at choke points, obstacles, and road blocks. After engaging the enemy with direct and indirect fires, infantry forces maneuver through the restricted terrain to alternate positions, progressively slowing and weakening the enemy.

Combat Support

As in all combat operations, CS units in an armored-light force are essential to applying superior combat power at the decisive time and place. Light forces have fewer combat support assets available than do armored forces. A light infantry division has an extremely austere CS structure and is designed to accept augmentation when the mission requires additional assets. Therefore, planners of operations involving an armored-light force at any level must be familiar with the organization, capabilities, and limitation of all forces involved. They must also understand the concept for providing augmentation to the infantry forces.

Augmentation

Augmentation is the single most important consideration during planning of armored-light operations. Augmentation provides light forces with sufficient CS to accomplish the mission. However, planners should not assume arbitrarily that the infantry force always requires major augmentation. A light force, given an appropriate mission and terrain consistent with its normal combined arms task organization and capabilities, can accomplish some missions without additional assets.

Combat Aviation

Generally, the organic aviation units in the infantry division can lift one light infantry battalion using the combined assets of the two assault companies (the armored division has one assault company). However, without additional CSS support, the light infantry division aviation maintenance organization does not easily support decentralized operations.

Field Artillery

All organic fire support in the light division is towed (105 and 155 millimeter) artillery and 60- or 8l-millimeter mortars. Armored and mechanized infantry divisions' artillery is self-propelled. Their mortars are vehicle-mounted 120 millimeter. Thus, when mixing the forces, commanders and staff must consider the availability of ammunition type, mobility, maintenance, and communications. The capability of air-lifting the infantry division's DS 105-millimeter battalion provides the force commander responsive, mobile artillery.

Personnel and equipment also differ between armored and infantry division artillery. The infantry division artillery's command and control elements have fewer personnel but the same responsibilities. Additionally, the infantry division artillery has limited ground resupply capability. It lacks target acquisition radar except for the countermortar radar. The light division artillery is not equipped with an armored fire support control system. This limits its ability to use or to interface with corps and armored division artillery without augmentation. This is especially true for counterfire.

Air Defense

The infantry division's air defense battalion is organized and equipped for a low air threat. Therefore, based on the air threat, the light force may require additional ADA support. Also, the ADA resupply capability is limited.

Chemical

The lighter divisions do not have an organic chemical company. These divisions routinely receive support from EAD assets for decontamination, smoke, and NBC reconnaissance.

Engineering

The engineer battalion in the infantry divisions (armored and mechanized divisions have a brigade) has limited terrain reinforcement capability. However, it can perform traditional mobility, countermobility, and survivability missions. By the nature of their organization, light engineers require additional assets to operate for extended periods of time against a robust threat.

The engineer battalion can support the infantry force in constructing fighting positions, command posts, and FA firing positions, and in improving small roads and trails. The battalion's equipment is capable of limited earth moving, scraping, and digging. In an armored-light force organization, the light engineer unit will require additional armored engineer elements, such as armored earth-moving equipment, haul assets, and mechanical mine-laying elements.

Communications

The infantry division's area communications system can support the division deployed over extended distances. Additionally, infantry forces use laptop computer networks for many tasks. The armored-light force may require additional communications support based on METT-T. The light force does not have the redundancy in communications system compared to the armored force. Although MSE contingency packages, forced entry switches (FESs), and tactical satellite systems have enhanced and expanded area signal capabilities and versatility, force communications remain a critical planning consideration. All means of augmentation to communications support should be exploited to include host nation fixed plant facilities when available.

Intelligence and Electronic Warfare

The light force's organic IEW assets are austere. These assets include limited jamming, collection, interrogation, and counterintelligence capability.

An armored-light force may require additional IEW assets. (For example, a light division has no electronic intelligence or ground-based jamming capability.) Additional assets should come from corps and EAC.

Military Police

Division MP companies fall into two categories-those that support armored or mechanized divisions and those that support the lighter infantry divisions. Both types of companies execute area security, battlefield circulation control, EPW control, and law and order. These functions are performed as prioritized in the division commander's concept of operations.

The division's provost marshal will initially have OPCON of the division MP company and any MP assets provided from corps. In armored and mechanized divisions, MP companies provide general support to the division's rear area and normally direct support to maneuver brigades. However, in the lighter infantry divisions, MP companies are not resourced to habitually provide direct support to maneuver brigades. In these lighter divisions, the MP company normally provides general support to the division as a whole. Corps MP assets will normally provide additional support for an armored-light mix of forces.

Combat Service Support

Generally, light forces cannot logistically support armored forces. The armored force's tremendous combat power comes with correspondingly high supply, maintenance, and transportation requirements. Consequently, the armored unit must sustain itself or be sustained by its parent division or the corps or joint force.

The armored division's method of support is similar to that of the light division. There are differences, however, which the armored division planners should consider. The infantry DISCOM is an austere support organization that emphasizes aerial resupply and push resupply to the lowest level possible, and a maintenance system which relies heavily on exchange versus repair. The infantry division normally depends on external transportation assets for mobility and movement of supplies. Water resupply for light forces is a critical concern. Soldiers in light divisions rely on canteens and 5-gallon water cans. DISCOMs are discussed in Chapter 1. Division sustainment is detailed in Appendix E.

The level of support directly affects the type of support and the force. To determine the appropriate level, planners consider—

- Structure of the supported force.
- Supported unit and its organic support organization-carried level of stock. (Special emphasis is given to classes I through V, VIII, and IX.)
- Levels of maintenance to be performed.
- Degree of mobility and transportation required.

- Duration and distances of the support to be provided.
- Capability to conduct replacement operations.
- Recovery operations.

The combat capability of both armored and infantry units are directly related to their logistics capabilities.